

## ADDENDUM NO. 1



TO: ALL BIDDERS OF RECORD

PROJECT: Selway Creek Fish Barrier Project

FWP PROJECT #: 20-03

DATE: 10/04/19

FROM: George Austiguy, Pioneer Technical Services

**Acknowledge receipt of this addendum by inserting its number and date in the Proposal Form and on the Bid Envelope. Failure to do so may subject bidder to disqualification.**

This Addendum forms a part of the Contract Documents. Clarification and/or modifications are as follows:

### **Contractor Questions and Clarifications**

1. **Question:** What is the anticipated date of the NTP (Notice to proceed)?

**Response:** Construction is anticipated to begin June 15, 2020.

### **Changes to Specifications**

## **SECTION 02210 - FILL MATERIALS AND PLACEMENT REQUIREMENTS**

### **PART 3 EXECUTION**

#### **3.04 COMPACTION**

**Replace Paragraph B with the following paragraph:**

B: Type A and C material and retaining wall backfill shall be compacted to a minimum of 95% of the maximum dry density as determined by ASTM D698.

The moisture content, as determined by ASTM D2216, shall be between  $\pm 2\%$  of the optimum moisture content as determined by ASTM D698. The moisture content shall be uniform throughout the lift. Placed materials not meeting this requirement, as determined by testing by Contractor, shall be scarified to a depth of 1 foot, wetted or dried as necessary to meet this requirement, and mixed to uniform water content.

**Summary of Change:** Provide additional compaction performance standard details.

## **SECTION 02270 - STREAM CHANNELS AND DIVERSIONS**

### **PART 3 EXECUTION**

#### **3.02 TEMPORARY STREAM DIVERSIONS OF SELWAY CREEK**

**Add the following paragraph**

E. Structural Embankment, toe drain and toe riprap must be completed and approved by Engineer prior to impounding water behind the fish barrier earthen embankment.

## **SECTION 03300 – CAST-IN-PLACE CONCRETE**

### **Part 3 – EXECUTION**

#### **1. Part 3.08 CONCRETE CURING AND PROTECTION, Replace the existing Paragraph C with the following replacement paragraph:**

- C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
1. Moisture Curing: Use a continuous water-fog spray to keep the concrete surface continuously wet.
  2. Moisture-Retaining-Cover: Cover concrete surfaces with specified moisture-retaining cover placed in the widest practicable width, with sides and ends lapped at least 4 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape. Thoroughly saturate cover with water and keep continuously wet for the duration of the specified curing period.
  3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

**Summary of Change:** Added curing compound option to concrete curing methods.

**Add the following as Appendix B**

**USFS Borrow Site Particle Size Gradation Report (Attached)**

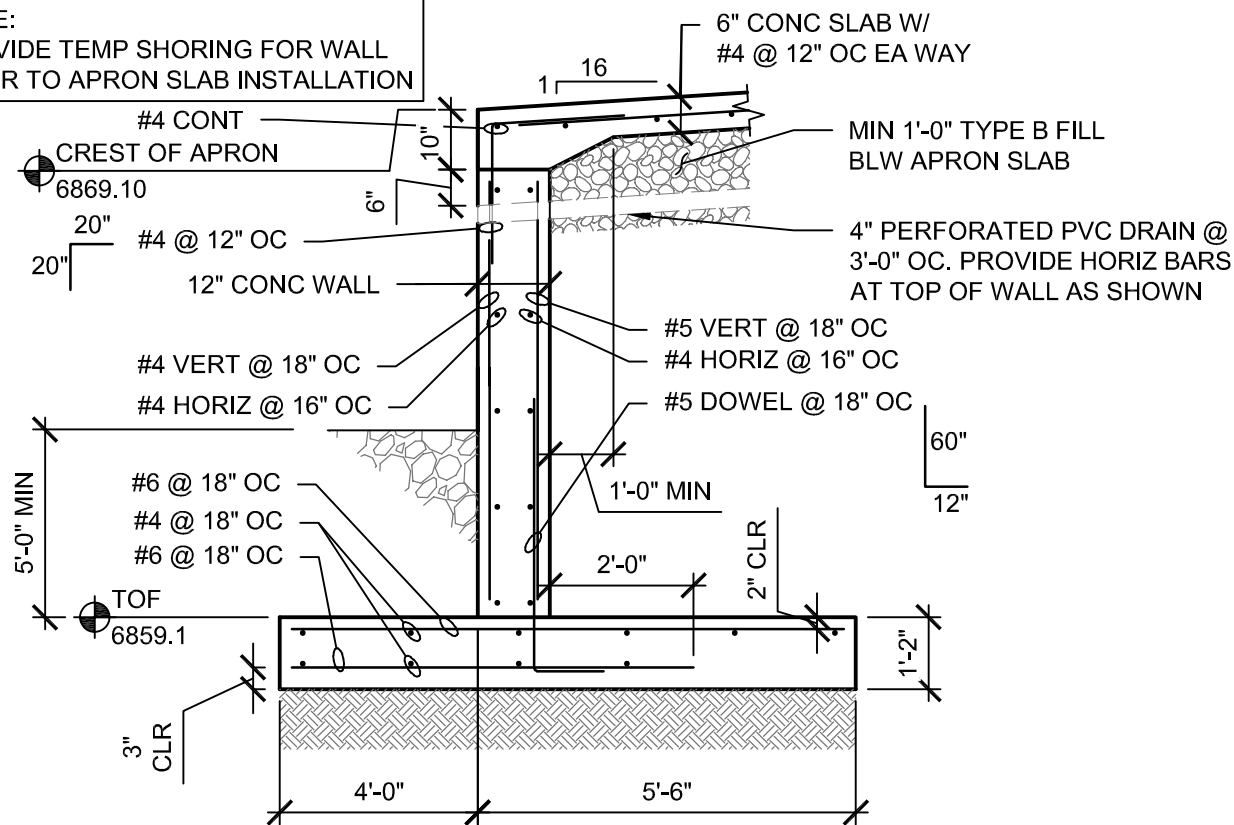
### **Changes to Plans**

1. **Sheet 8:** Corrected errors.
2. **Sheet 9:** Corrected errors.

**END OF ADDENDUM NO.1**



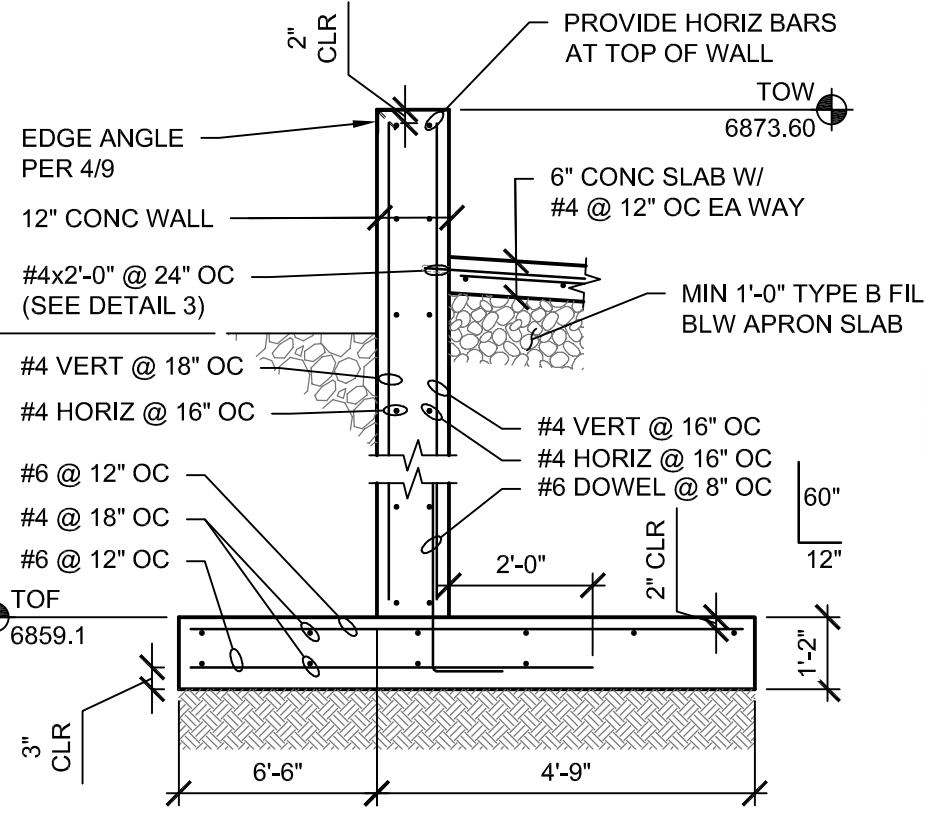
NOTE:  
PROVIDE TEMP SHORING FOR WALL  
PRIOR TO APRON SLAB INSTALLATION



1

## DOWNSTREAM WEIR WALL

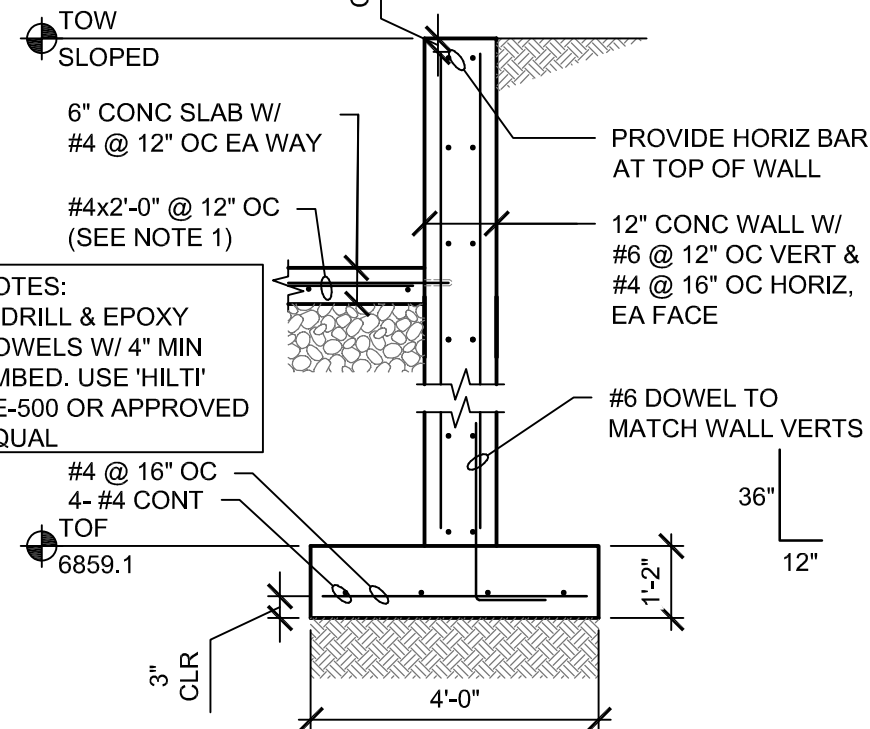
SCALE: NTS



2

## UPSTREAM WEIR WALL

SCALE: NTS

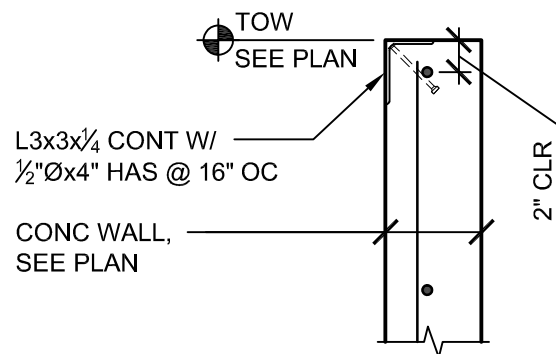


3

## APRON SIDE WALL

SCALE: NTS

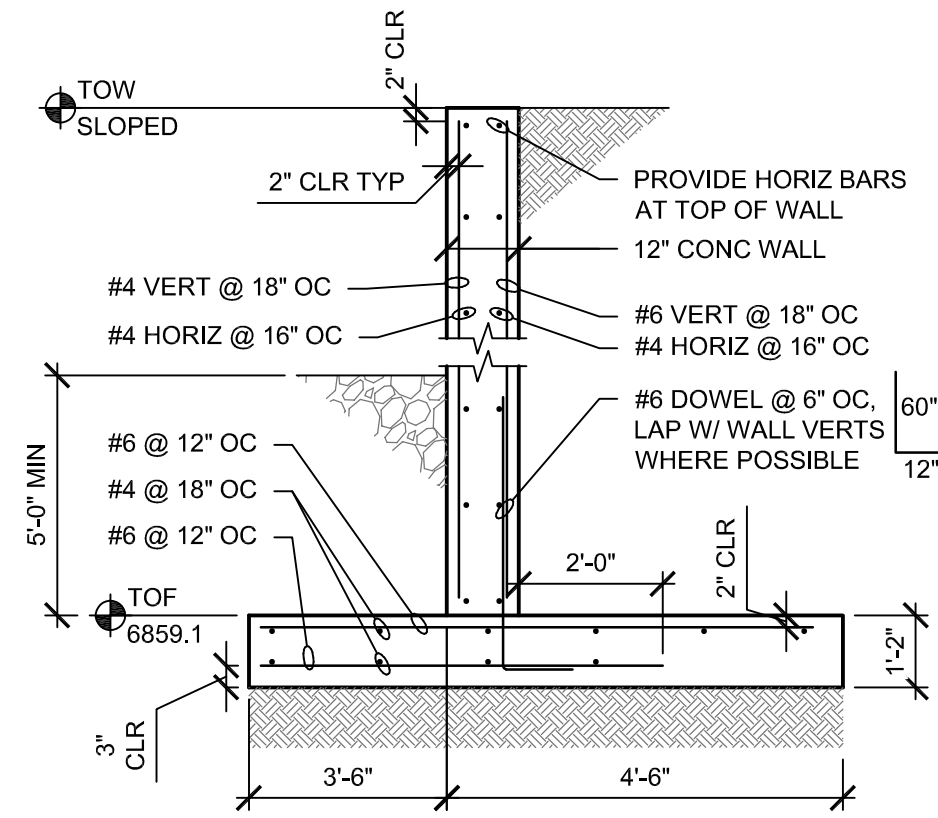
NOTES:  
1. STEEL ANGLE MATERIAL SHALL CONFORM TO  
ASTM A36,  $F_y = 36$  ksi  
2. HEADED ANCHOR STUD MATERIAL SHALL  
CONFORM TO ASTM A108, GRADE 1015,  $F_u = 65$  ksi



4

## GUARD ANGLE @ TOW

SCALE: NTS



5

## WEST SIDE WALL

SCALE: NTS

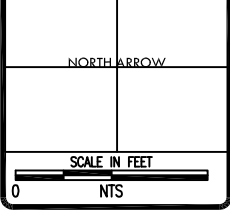
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CIVIL / STRUCTURAL  
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REVISION:	DATE:	BY:	DESC:

DRAWN BY:	
DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
PROJECT NO:	
DATE:	02/24/2019

DISPLAYED AS:	
COORD SYS / ZONE:	NA
DATUM:	NA
UNITS:	NA
SOURCE:	



MT FWP  
SELWAY CREEK  
FISH BARRIER

STRUCTURAL DETAILS

**PIONEER**  
TECHNICAL SERVICES, INC.  
106 PRONGHORN TRAIL, SUITE A  
BOZEMAN, MONTANA 59718  
(406) 388-8579

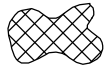




# APPENDIX B


## USFS AVAILABLE BORROW SITES

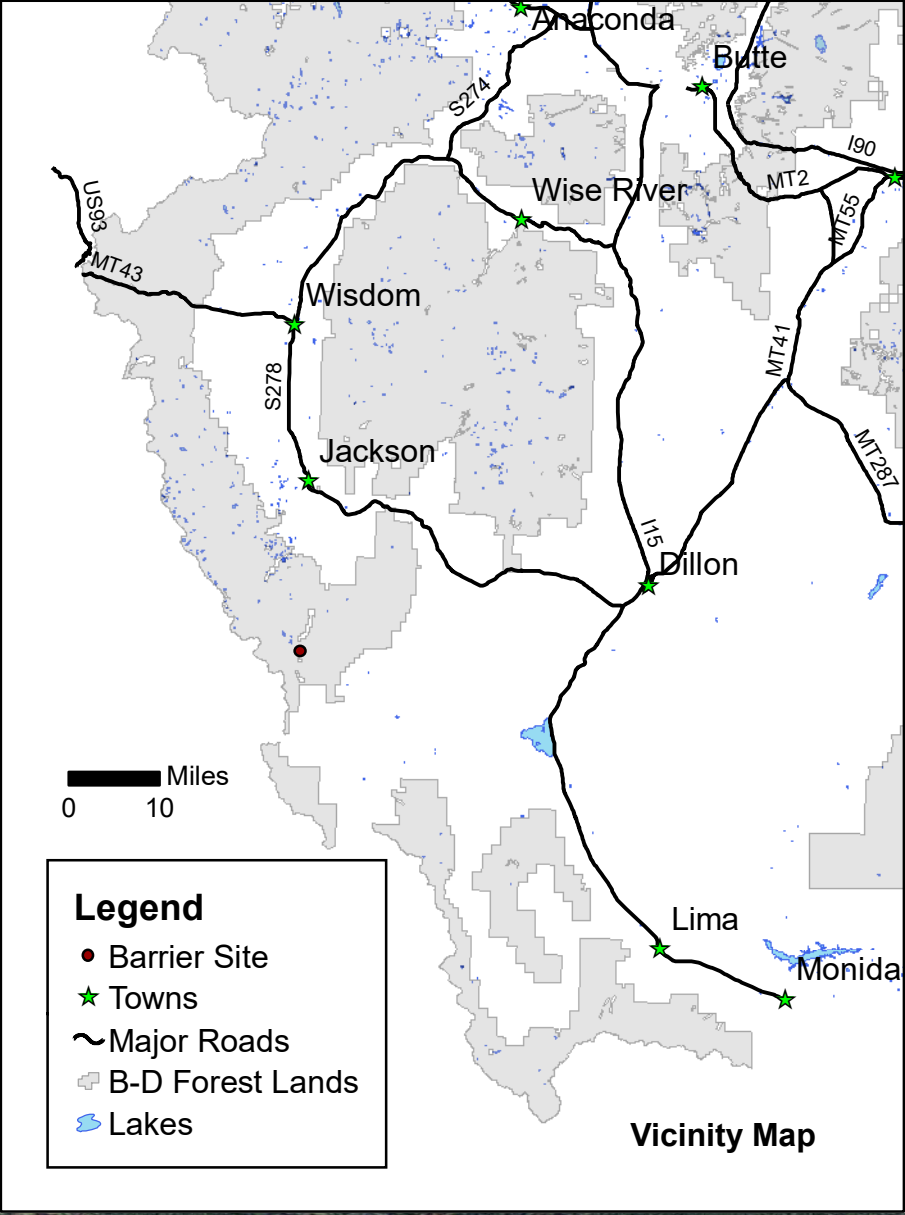
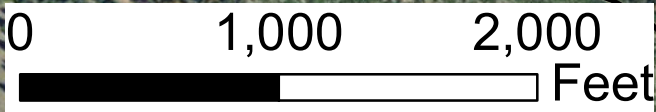
Particle Size Distribution Reports for Borrow Site B-1

# Selway Barrier Site

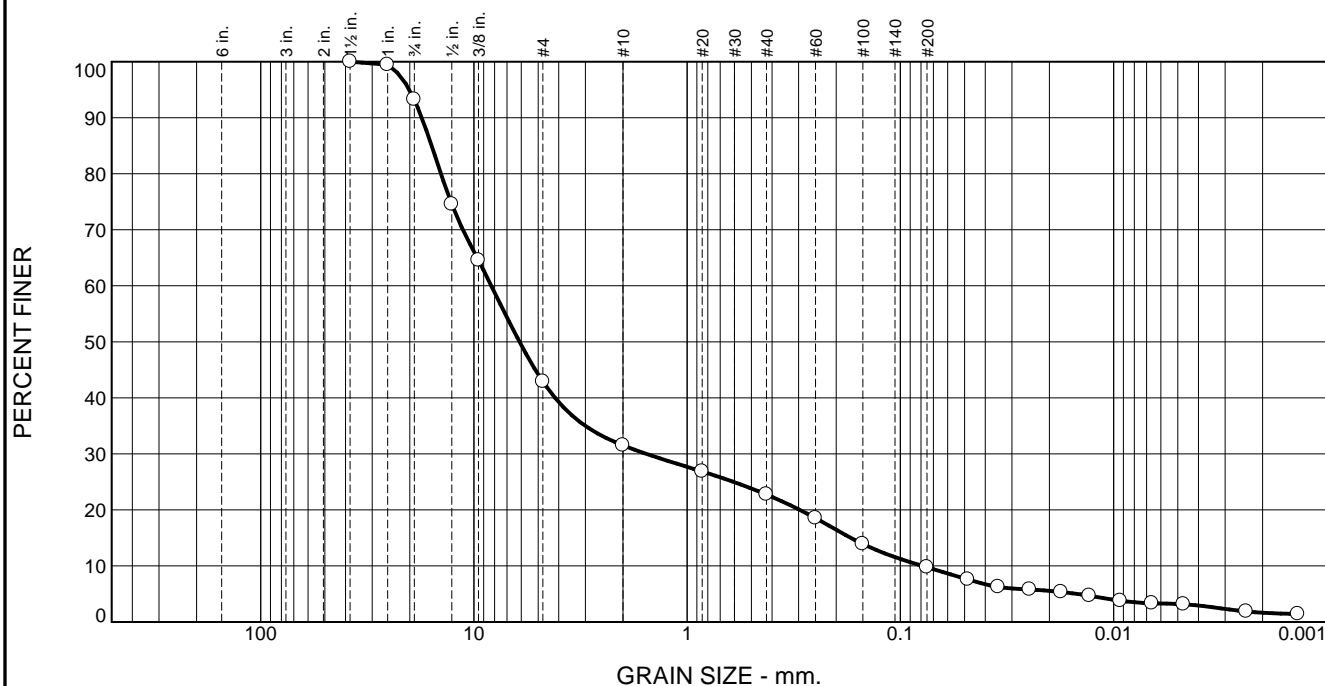
**Legend**

-  Approved Source material
-  Access routes
-  Barrier Site
-  Streams
-  Roads





# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	6.8	50.3	11.4	8.8	12.9	6.6	3.2

TEST RESULTS			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1 1/2"	100.0		
1"	99.5		
3/4"	93.2		
1/2"	74.6		
3/8"	64.5		
#4	42.9		
#10	31.5		
#20	26.8		
#40	22.7		
#60	18.5		
#100	13.9		
#200	9.8		
0.0483 mm.	7.6		
0.0348 mm.	6.2		
0.0248 mm.	5.8		
0.0176 mm.	5.3		
0.0130 mm.	4.7		
0.0093 mm.	3.8		
0.0066 mm.	3.3		
0.0047 mm.	3.2		
0.0024 mm.	1.9		
0.0014 mm.	1.4		

\* (no specification provided)

## Material Description

poorly graded gravel with silt and sand

## Atterberg Limits (ASTM D 4318)

PL= 17 LL= 20 PI= 3

## Classification

USCS (D 2487)= GP-GM AASHTO (M 145)= A-1-a

## Coefficients

D<sub>90</sub>= 17.5758 D<sub>85</sub>= 15.8011 D<sub>60</sub>= 8.2915  
D<sub>50</sub>= 6.1137 D<sub>30</sub>= 1.5546 D<sub>15</sub>= 0.1707  
D<sub>10</sub>= 0.0788 C<sub>u</sub>= 105.27 C<sub>c</sub>= 3.70

## Remarks

Date Received: \_\_\_\_\_ Date Tested: 6-18-18

Tested By: LPS/JM

Checked By: NG

Title: Laboratory Manager

Source of Sample: Borrow  
Sample Number: G18384

Date Sampled:

Pioneer Technical Services, Inc.

106 Pronghorn Trail, Suite A - Bozeman, MT 59718

Ph. 406-388-8578 - Fax 406-388-8579

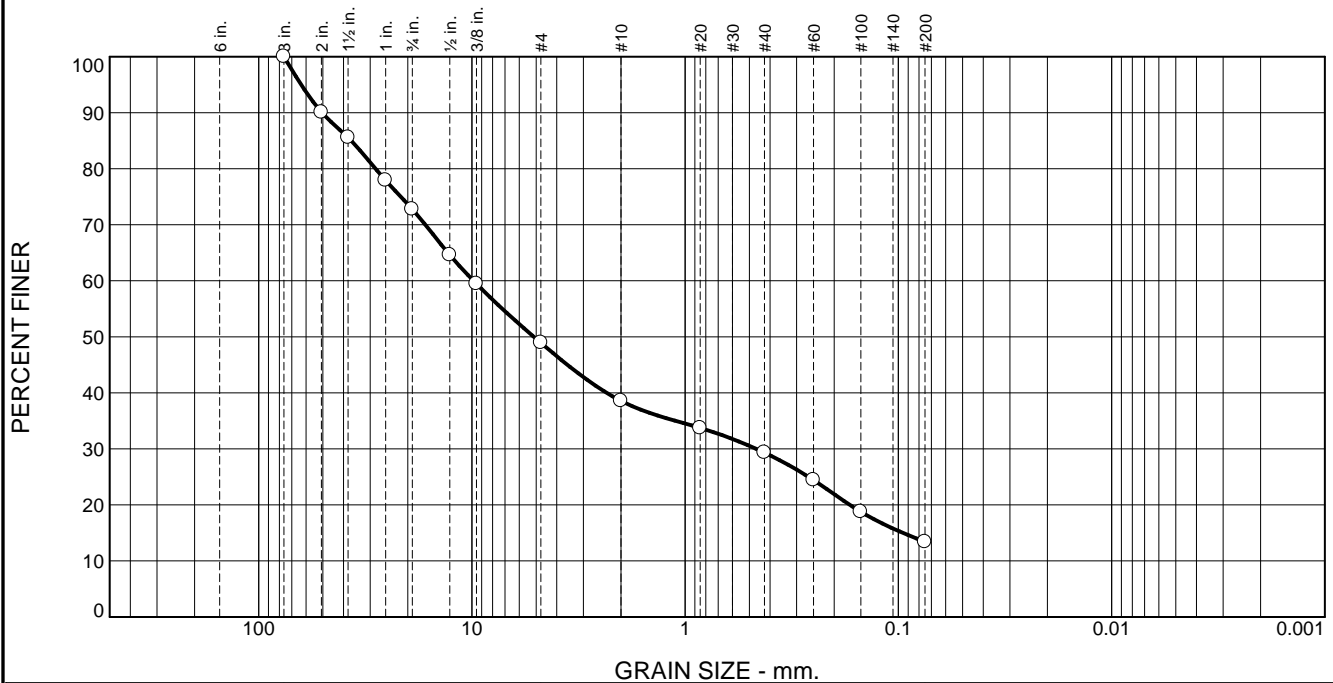
Client: FWP

Project: Selway Creek Fish Barrier

Project No:

Figure

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	27.2	23.9	10.3	9.3	15.9	13.4	

TEST RESULTS			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0		
2"	90.1		
1 1/2"	85.6		
1"	77.9		
3/4"	72.8		
1/2"	64.6		
3/8"	59.5		
#4	48.9		
#10	38.6		
#20	33.7		
#40	29.3		
#60	24.4		
#100	18.8		
#200	13.4		

\* (no specification provided)

## Material Description

silty gravel with sand

## Atterberg Limits (ASTM D 4318)

PL= 18 LL= 20 PI= 2

## Classification

USCS (D 2487)= GM AASHTO (M 145)= A-1-a

## Coefficients

D<sub>90</sub>= 50.5644 D<sub>85</sub>= 36.8252 D<sub>60</sub>= 9.8336  
D<sub>50</sub>= 5.1251 D<sub>30</sub>= 0.4637 D<sub>15</sub>= 0.0950  
D<sub>10</sub>= C<sub>u</sub>= C<sub>c</sub>=

Remarks

Date Received: \_\_\_\_\_ Date Tested: 6-18-18

Tested By: LPS/JM

Checked By: NG

Title: Laboratory Manager

Source of Sample: Borrow  
Sample Number: G18385

Date Sampled:

Pioneer Technical Services, Inc.

106 Pronghorn Trail, Suite A - Bozeman, MT 59718

Ph. 406-388-8578 - Fax 406-388-8579

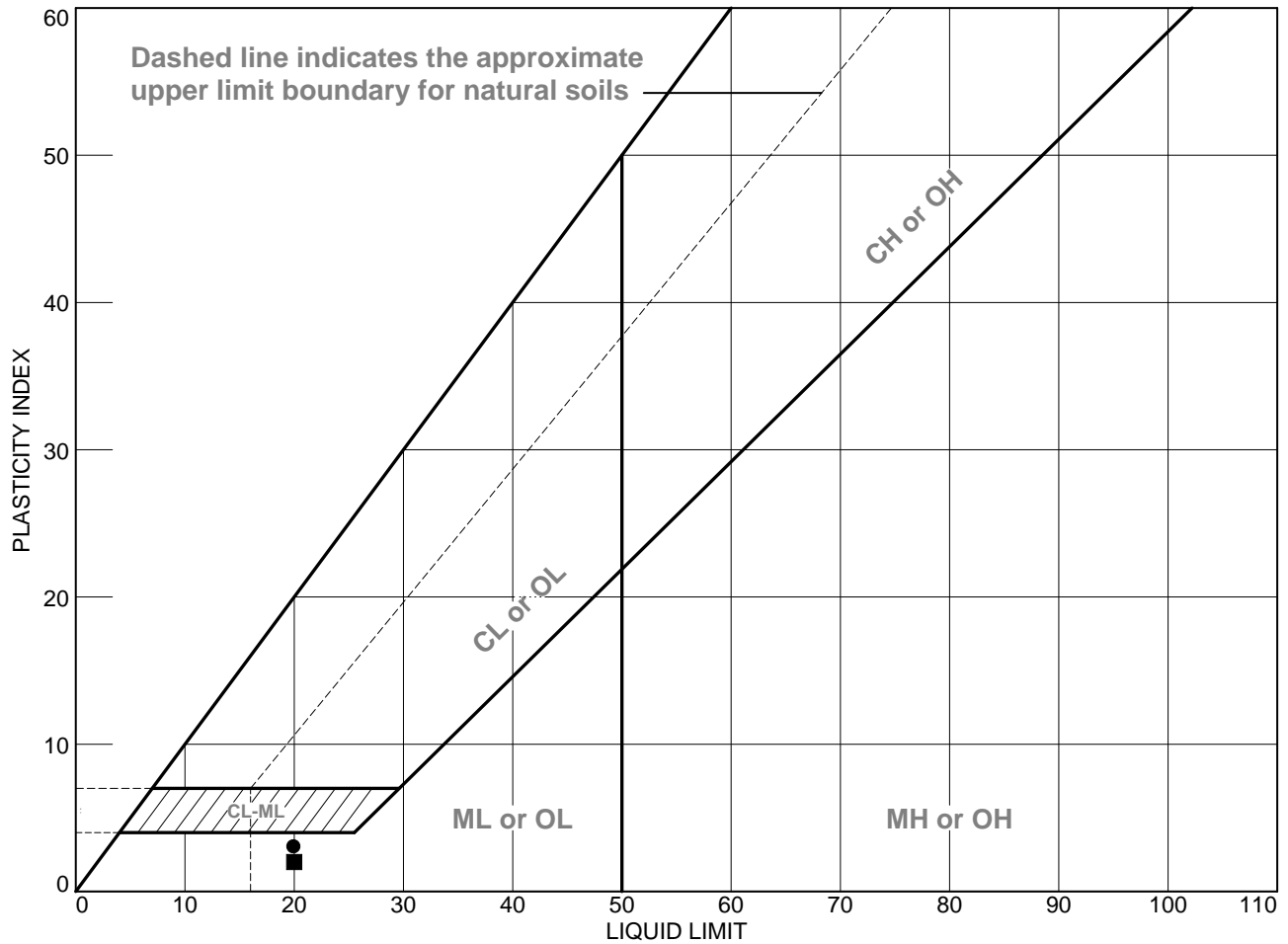
Client: FWP

Project: Selway Creek Fish Barrier

Project No:

Figure

# LIQUID AND PLASTIC LIMITS TEST REPORT



## SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Borrow	G18384			17	20	3	GP-GM
■	Borrow	G18385			18	20	2	GM

**Pioneer Technical Services, Inc.**

106 Pronghorn Trail, Suite A - Bozeman, MT 59718

Ph. 406-388-8578 - Fax 406-388-8579

**Client:** FWP

**Project:** Selway Creek Fish Barrier

**Project No.:**

**Figure**

Tested By: LPS Checked By: NG